



豪力輝工業股份有限公司

HOLD WELL INDUSTRIAL CO., LTD.



2015 新產品
NEW PRODUCT



ISO 9001:2008
ID 9105040234



2015
NEW PRODUCT



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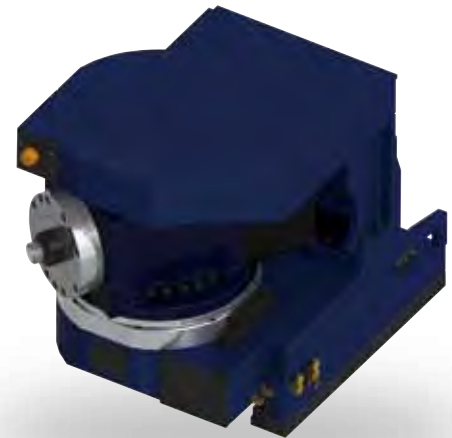
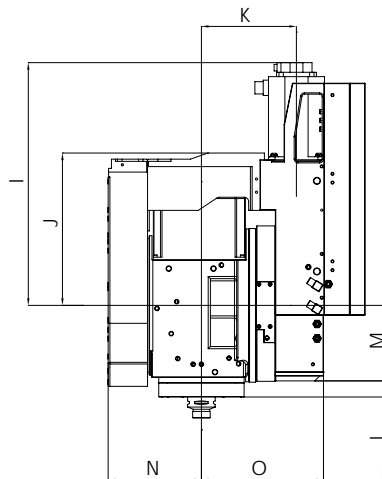
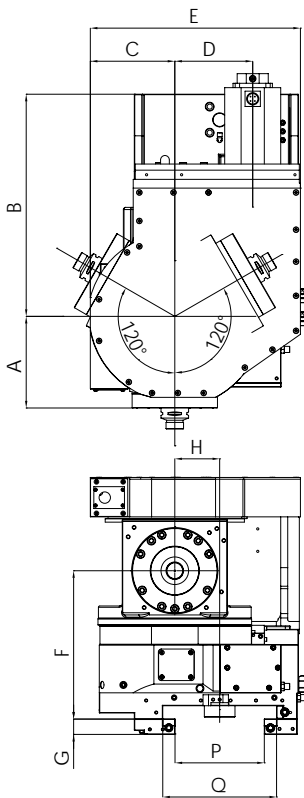
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車銑複合搖擺主軸頭

Turn-Mill Multifunction Head

- 4/5 軸同動加工
- 內藏式 6000/12000rpm 車銑主軸
- B 軸 240 度連續定位轉向
- B 軸 7.5 度一分割定點角度加工
- 4-Axis or 5-Axis machining in one set-up.
- Swivel Tool Spindle (B-axis) with built-in spindle 6000/12000 rpm.
- B-Axis continuous indexing travels 240 degrees.
- B-Axis : 7.5 degrees of positioning indexing resolution (by coupling).



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	N.W. (KG)
TMS	209.3	507.5	193	178	480	339	35	102.5	554.5	348	217	37	172.5	213	279	204	260	445

Unit : mm

主軸 Spindle		一般	Standard	高速	High Speed
刀具系統	Tool Interface	HSK 63			
功率	Power	11 KW		18.5 KW	
最大扭力	Max. Torque	60Nm(15%ED)		31Nm(15%ED)	
最高轉速	Max. Speed	6000 RPM		12000 RPM	
潤滑方式	Type of Lub.	油氣	Greased & Air	油氣	Greased & Air
冷卻方式	Type of Cooling	水冷	Water-Cooling	水冷	Water-Cooling
B 軸 B-Axis					
搖擺轉速	Swivel Speed	30 RPM			
搖擺角度	Swivel Angle	± 120°			
最小切割精度	Min. Indexing Accuracy	0.001°			
重複精度	Repeat Accuracy	2" (90°)			
最大扭力	Max. Torque	1200 Nm			



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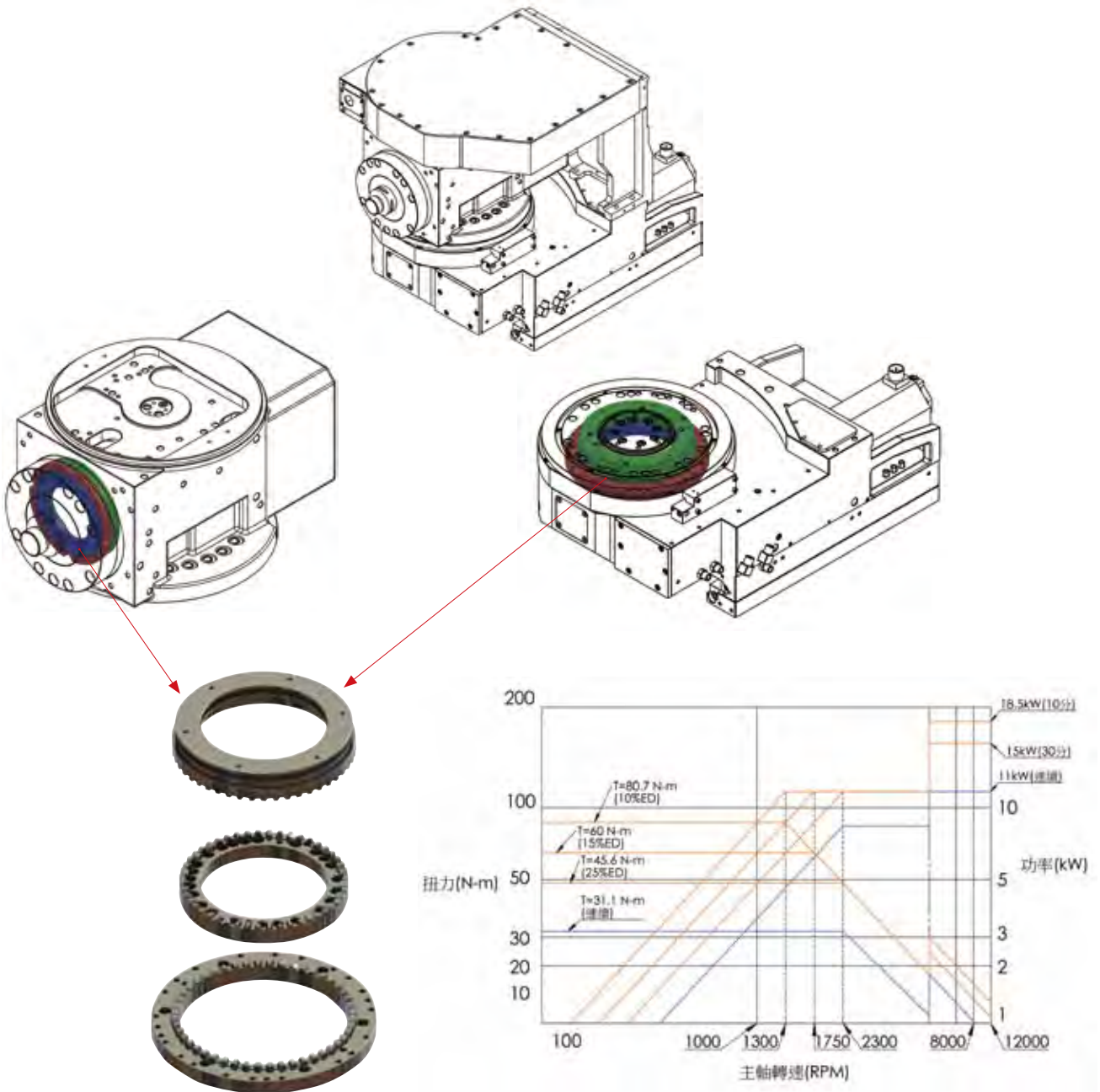


車銑複合搖擺主軸頭

Turn-Mill Multifunction Head

三片式曲齒離合器 Triple Plate Curvic Coupling

- 主軸與 B 軸加入三片式曲齒離合器設計，提高主軸在做車削加工時產生的扭矩剛性，B 軸定角度加工剛性與車削加工剛性。
- Spindle and B-Axis are embedded with Triple Plate Curvic Coupling structure enhancing the torque during various turn-mill application.



差異性比較 Differences

	主軸 Spindle	B 軸 B-Axis
車銑複合搖擺主軸頭 Turn-Mill Multifunction Head	三片式曲齒離合器 (15 度一分割) Triple Plate Curvic Coupling (15 degree per division)	三片式曲齒離合器 + 渦桿渦輪 (7.5 度一分割) Triple Plate Curvic Coupling + Worm gear drive structure (7.5 degree per division)
一般車銑複合主軸 Other Turn-Mill Spindle	馬達環抱式剎車 Motored encircled brake	渦桿渦輪 Worm gear drive structure



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U 軸搪削頭

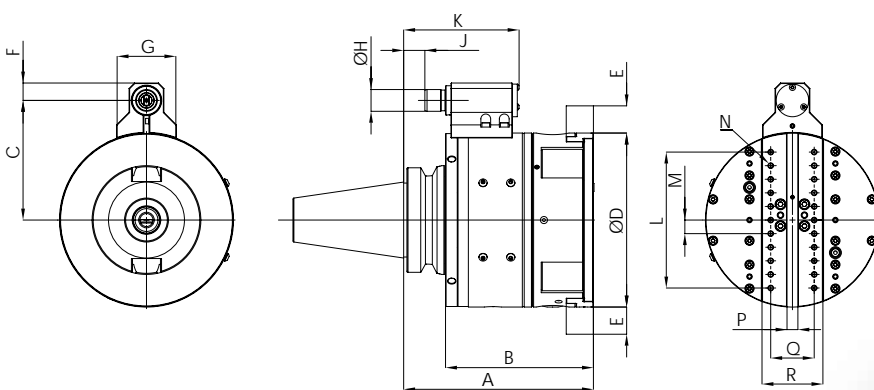
U-Axis Boring and Facing Head

- 可用於一般綜合加工機，經由一個 U 軸伺服馬達控制搪削頭的滑塊徑向位移，且可在主軸旋轉中同步進給加工，可完成車牙、錐度、切槽、逃溝、曲面等加工，實現中心加工機車削的功能。
- 可自動換刀功能，結合一般加工工序，實現不中斷、一機到底的最高加工效率。
- 配合模式化刀盤設計，刀具變化性高，一支刀把即可完成所有工序。
- 增加特殊配重塊設計，可於調整尺寸時，平衡刀具重心偏移問題，減少加工震顫。

- With a U-Drive unit commanding the feed control of the tool slide and the tool placement even during rotation, it is made to offer the solution to a series of processes such as threading, conical threading, grooves, slots, curve surface machining and other complex profiles. It makes it possible to do turning operations on all machining centers.
- It is designed to be used on automatic tool changers to maximize the working efficiency.
- Modular tool-holder slide with interchangeable design permits the various tool applications and machining.
- It is specially designed with two counter-weights for automatic balancing, which move opposite to the slide to effectively eliminate oscillations.

進給	: 500 mm/min
徑向力	: 250 daN
最高轉速	: 1600 RPM
扭力	: 800 Nm
搪孔精度	: H7
最大加工直徑	: 320 mm
移除率	: 1 mm ²
表面粗糙度	: Ra 0.8

Feed	: 500 mm/min
Radial force	: 250 daN
Max. speed	: 1600 RPM
Torque	: 800 Nm
Boring accuracy	: H7
Max workable Φ	: 320 mm
Mac chip removal on C40 steel	: 1 mm ²
Roughness	: Ra 0.8



Model No.	A	B	C	ΦD	E Radial Traverse 徑向行程	F	G	H	J	K	L	M	N	P	Q	R	N.W. (KG)
BHA-160	174.5	136	110	160	± 25	16	54	20	19.5	106.5	125	12.5	M6	10	40	56	19.5

Unit : mm



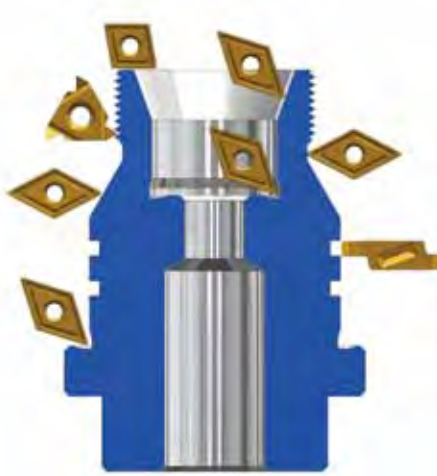
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U 軸搪削頭

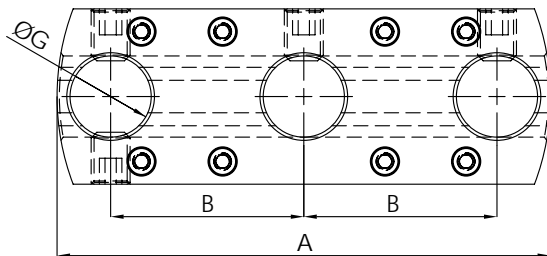
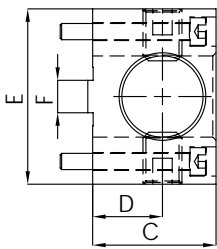
U-Axis Boring and Facing Head

加工應用及範例 Application



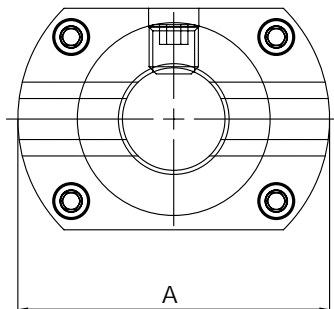
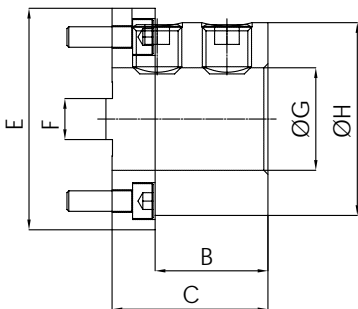
選購配件 Optional Accessory

模組化鎖刀座 Modular Tool-Holder Slide



Model No.	A	B	C	D	E	F	G	N.W. (KG)	Order No.
HD4-160.25	152	59.5	38	21.5	54	10	25	1.6	2AH-0022

Unit : mm



Model No.	A	B	C	E	F	G	H	N.W. (KG)	Order No.
HD1-160.25	76	27.5	38	54	10	25	47	1.6	2AH-0022

Unit : mm



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90° 橫向銑頭

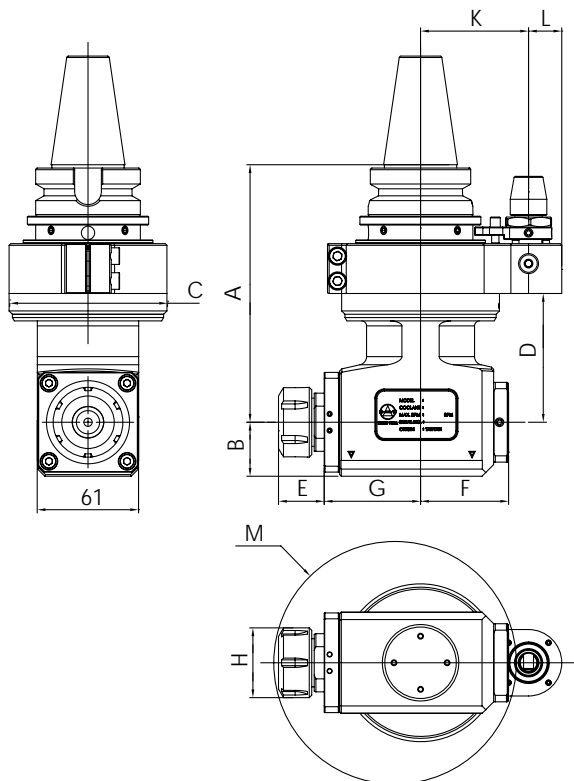
90° Angle Head

- 輕量化設計，適用於鑽銑加工及攻牙加工。
- 自動刀庫換刀加工，量化生產必備工具。
- 環抱型定位塊設計，可 360 度旋轉調整加工角度，並加強鎖固力道及加工角度精確性。

- Compact and lighter body design is suitable for drilling, milling, and tapping application.
- Can be automatic tool changed. Increases productivity.
- Enclosed Positioning Pin: Cutting Direction can be adjusted from 0~360 degrees. It allows higher clamping torque and cutting direction could remain during the machining.

內孔偏擺度	: 0.002 mm
材質	: 鋁合金 / 合金鋼
轉速	: 最高 4000 RPM
扭力	: 最大 30 Nm
齒輪比	: 1 : 1
適用主軸	: BT, SK(ISO), CAT
標準配件	: 鉤型扳手
出力軸轉向	: 反轉

Run-out	: 0.002 mm
Material	: Alloy Steel
R.P.M.	: Max. 4000 RPM
Torque	: Max. 30 Nm
Gear Ratio	: 1 : 1
Spindle Type	: BT, SK(ISO), CAT
Standard Accessory	: Open End Wrench, ER Wrench, ER Nut
Output Rotation	: Reverse to Input Rotation



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N.W. (KG)
AHL-BT40-A2	155	32.5	95	61	27.5	53	58	42	61	1~16(ER25)	65	20	146	6.7
AHL-SK40-A2	155	32.5	95	61	27.5	53	58	42	61	1~16(ER25)	65	20	146	6.7
AHL-CAT40-A2	155	32.5	95	61	27.5	53	58	42	61	1~16(ER25)	65	20	146	6.7
AHL-BT40-A3	155	32.5	95	77.5	32.5	53	58	50	61	3~20(ER32)	65	20	152	6.8
AHL-SK40-A3	155	32.5	95	77.5	32.5	53	58	50	61	3~20(ER32)	65	20	152	6.8
AHL-CAT40-A3	155	32.5	95	77.5	32.5	53	58	50	61	3~20(ER32)	65	20	152	6.8

Unit : mm



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萬向銑頭

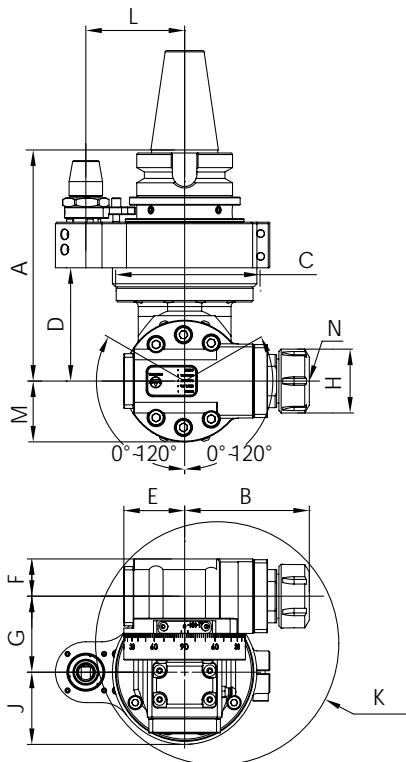
Universal Angle Head

- 0°~±120°加工角度多樣化，適用於各種加工應用。
- 輕量化設計、剛性高、防油、防塵佳、使用壽命長。
- 自動刀庫換刀加工，量化生產必備工具。
- 環抱型定位塊設計，可 360 度旋轉調整加工角度，並加強鎖固力道及加工角度精確性。

- Cutting angle can be set from 0°~±120° from various application.
- Compact and lighter body design provide extra strength, oil-proof, dust-proof, and duration.
- Can be automatic tool changed. Increases productivity.
- Enclosed Positioning Pin: Cutting Direction can be adjusted from 0~360 degrees. It allows higher clamping torque and cutting direction could remain during the machining.

內孔偏擺度	: 0.002 mm
材質	: 合金鋼
轉速	: 最高 6000 RPM
扭力	: 最大 25 Nm
齒輪比	: 1 : 1
適用主軸	: BT, SK(ISO), CAT
標準配件	: 開口扳手、ER 扳手、ER 螺帽
出力軸轉向	: 反轉

Run-out	: 0.002 mm
Material	: Alloy Steel
R.P.M.	: Max. 6000 RPM
Gear Ratio	: 1 : 1
Torque	: Max. 25 Nm
Spindle Type	: BT, SK(ISO), CAT
Standard Accessory	: Open End Wrench, ER Wrench, ER Nut
Output Rotation	: Reverse to Input Rotation



Model No.	A	B Max	C	D	E	F	G	H	J	K	L	M	N	N.W. (KG)
AHL-BT40-B2	152	82	95	74.5	40	24.5	50	42	40.5	160	65	40	2~16(ER25)	6.9
AHL-SK40-B2	152	82	95	74.5	40	24.5	50	42	40.5	160	65	40	2~16(ER25)	6.9
AHL-CAT40-B2	152	82	95	74.5	40	24.5	50	42	40.5	160	65	40	2~16(ER25)	6.9

Unit : mm



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鋁合金後縮橫向銑頭

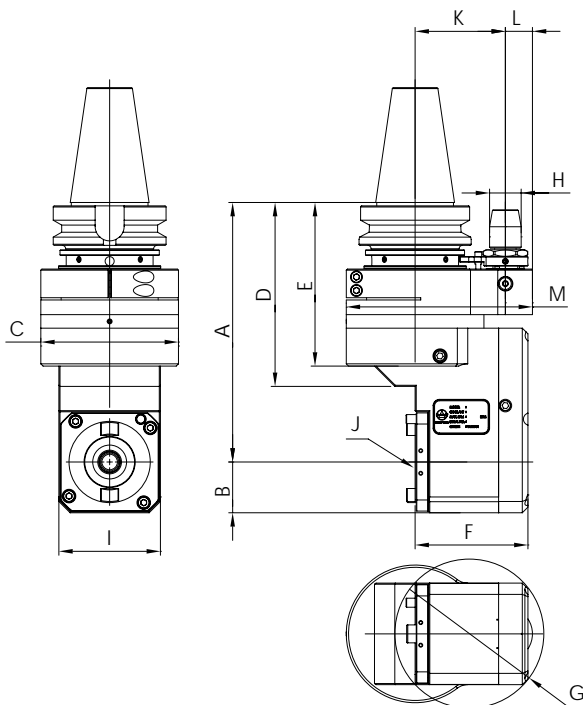
Aluminum Offset Angle Head

- BT40 刀具接合介面，提供各種 BT40 刀具之彈性應用，涵蓋大部分加工應用。
- 採用後縮設計，減少本體長度，降低工件干涉。
- 刀具加工支點靠近橫銑頭中心增加加工剛性。
- 拆刀、鎖刀板手設計，方便拆鎖刀時固定橫向軸與施力。
- 自動刀庫換刀加工，量化生產必備工具。
- 環抱型定位塊設計，可 360 度旋轉調整加工角度，並加強鎖固力道及加工角度精確性。

- The output interface of BT40 ensures wide-range application with various BT40 Tool Holder.
- Offset design ensures compact body and largely eliminates interference.
- Offset design eliminates the protrusion of tools and enhances working rigidity.
- Special tool-locking design ensures easier tool engagement and release.
- Can be automatic tool changed. Increases productivity.
- Enclosed Positioning Pin: Cutting Direction can be adjusted from 0~360 degrees. It allows higher clamping torque and cutting direction could remain during the machining.

內孔偏擺度	: 0.002 mm
材質	: 鋁合金 / 合金鋼
轉速	: 最高 4000 RPM
扭力	: 最大 50 Nm
齒輪比	: 1 : 1
適用主軸	: BT, SK(ISO), CAT
標準配件	: 鎖刀板、六角板手
出力軸轉向	: 反轉

Run-out	: 0.002 mm
Material	: Aerospace Alu. Alloy / Alloy Steel
R.P.M.	: Max. 4000 RPM
Torque	: Max. 50 Nm
Gear Ratio	: 1 : 1
Spindle Type	: BT, SK(ISO), CAT
Standard Accessory	: Tool-Locking Plate, Hex Spanner
Output Rotation	: Reverse to Input Rotation



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N.W. (KG)
AHM-BT50-D42.230	230	45	122	163	145	100	132	28	90	BT40	80/85/110	24	165	14.8
AHM-SK50-D42.230	230	45	122	163	145	100	132	28	90	BT40	80/85/110	24	165	14.8
AHM-CAT50-D42.230	230	45	122	163	145	100	132	28	90	BT40	80/85/110	24	165	14.8

Unit : mm



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徑向內側銑動力刀座 (外部出水)

Radial Side Cutting Tool Holder



齒輪比
Gear Ratio

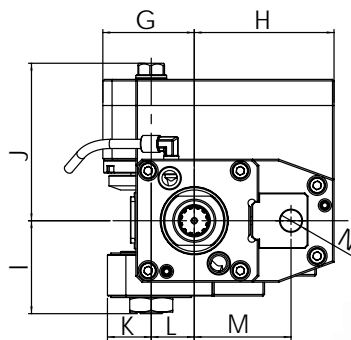
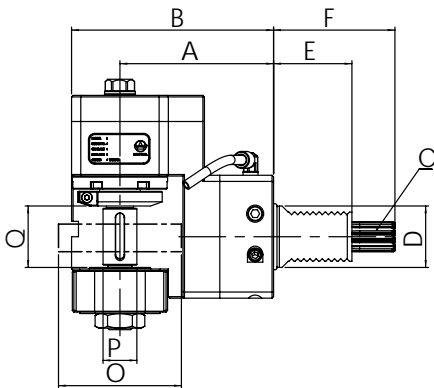
1:0.33



輸入轉速最高
Input R.P.M. Max.

4,000 RPM

- 接合面依據 DIN 69880
- 傳動軸為 DIN 5482
- 輸出軸筒夾為 DIN6499
- 同時適用於左手型刀塔及右手型刀塔
- Tool Holder is produced in accordance with DIN 69880.
- Driven Coupling is according to DIN5482.
- ER Collet is according to DIN 6499.
- For left hand and right hand turret.



Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P	Q	N.W. (KG)
THB-J30.100-40CR0.33	100	131.5	B17*14	40	51	79	59.5	91	60.5	102.5	28.5	28	63	80	22	40	13
THB-J30.100-40LR0.33	100	131.5	B20*17	40	51	79	59.5	91	60.5	102.5	28.5	28	63	80	22	40	13

Unit : mm

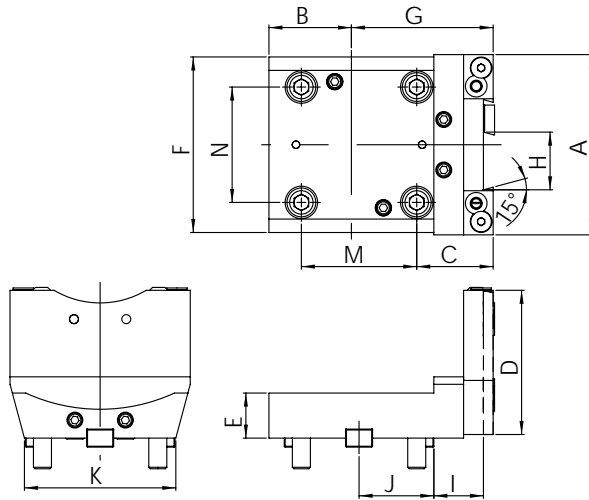


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切斷刀座 H1

Cut-off Tool Holder (Adjustable) H1

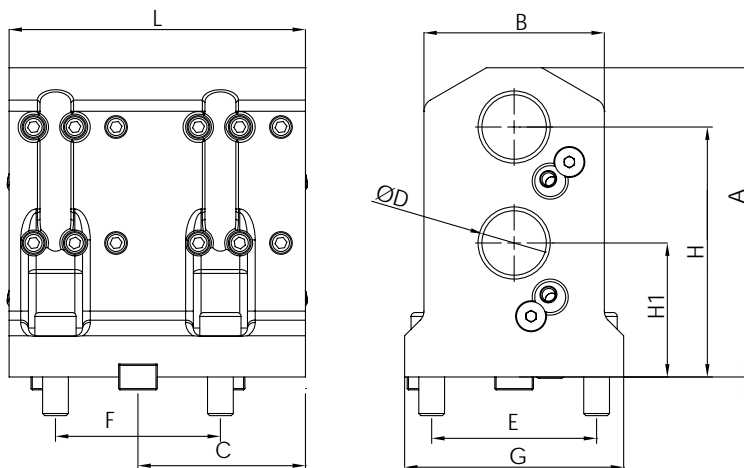


Model No.	A	B	C	D	E	F	G	H	I	J	M	N	K	N.W. (KG)	適用機台
THL-DPM-H1-5532	100	45.75	42.4	80	25	97.397	78.65	32	27.5	41.5	64	64	84	2.4	PUMA 230, PUMA 240(M/MS), PUMA 280 LM, PUMA 1500/2000/2500(M/MS/Y/SY), PUMA 2100

Unit : mm

徑向兩孔刀座 T2

2-Pos. Boring Bar Tool Holder T2



Model No.	A	B	C	D	E	F	G	H	H1	L	N.W. (KG)	適用機台
THL-DPM-T2-5525.452	120	70	65	25.4	64	64	85	97	52	115	5.5	PUMA 230, PUMA 240(M/MS), PUMA 280 LM, PUMA 1500/2000/2500(M/MS/Y/SY), PUMA 2100
THL-DPM-T2-552552	120	70	65	25	64	64	85	97	52	115	5.5	PUMA 230, PUMA 240(M/MS), PUMA 280 LM, PUMA 1500/2000/2500(M/MS/Y/SY), PUMA 2100

Unit : mm

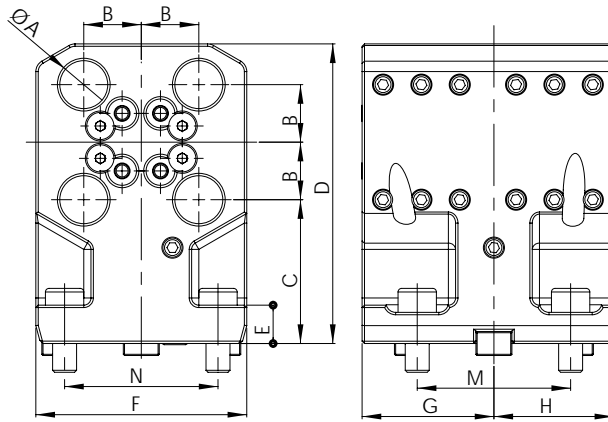


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徑向四孔刀座 T4

4-Pos. Boring Bar Tool Holder T4



Model No.	A	B	C	D	E	F	G	H	M	N	N.W. (KG)	適用機台
THL-DPM-T4-5519.0560	19.05	24	60	125	16	88	55	50	64	64	6.3	PUMA 230, PUMA 240(M/MS), PUMA 280 LM, PUMA 1500/2000/2500(M/MS/Y/SY), PUMA 2100
THL-DPM-T4-552060	20	24	60	125	16	88	55	50	64	64	6.3	PUMA 230, PUMA 240(M/MS), PUMA 280 LM, PUMA 1500/2000/2500(M/MS/Y/SY), PUMA 2100

Unit : mm



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置爪

Jaw Box

■ 夾持虎口材質為鉻鉬合金鋼，韌性及剛性強。

Jaw Material is made of Cr-Mo Alloy steel. High tenacity & rigidity.



■ 適用於車床與五面加工機之大型旋轉盤。

Compatible on big-sized rotary table of Vertical Turing Center and 5-Face Machine Center.

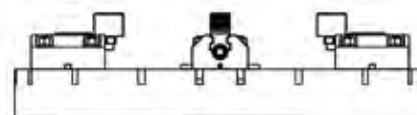
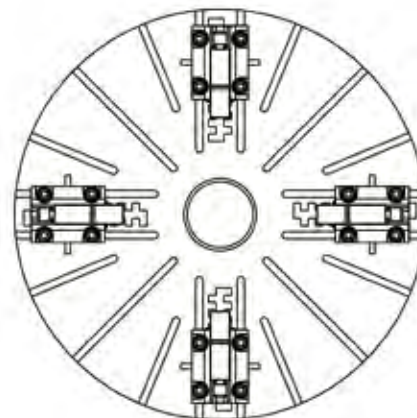
■ 大螺距主螺桿，傳動速度快、剛性強。

An enlarged thread master screw rod could make Jaw move forward and backward fast. High rigidity.

■ 快速定位機構方便調整夾持距離。

Quick clamping position design can improve working efficiency.

應用範例 Application





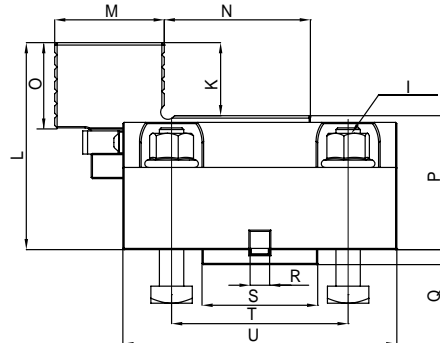
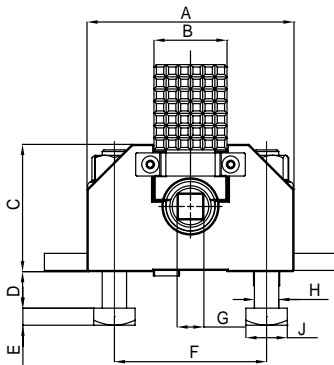
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置爪

Jaw Box

HWY-BH4-125 / BH7-180

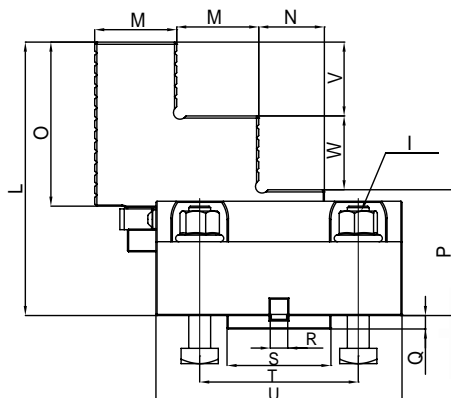
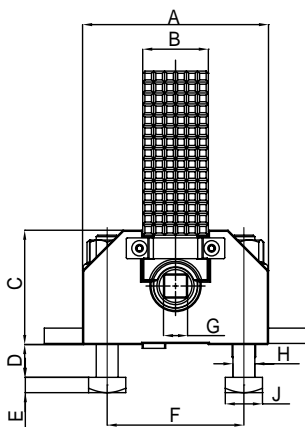


型號 Model NO.	A	B	C	D	E	F	G	H	I	J	K	淨重(kg)
HWY-BH4-125	170	60	104.5	30	14	125	22	Ø20	M20	34	60	32
	L	M	N	O	P	Q	R	S	T	U		
	170	90	120	70	110	12.3	16	95	145	225		

型號 Model NO.	A	B	C	D	E	F	G	H	I	J	K	淨重(kg)
HWY-BH7-180	240	80	125	40	20	180	26	Ø31.5	M24	50	60	55
	L	M	N	O	P	Q	R	S	T	U		
	195	95	125	77	135	14	25	95	170	270		

單位 Unit : mm

HWY-BH4-125H / BH7-180H



型號 Model NO.	A	B	C	D	E	F	G	H	I	J	L	淨重(kg)
HWY-BH4-125H	170	60	104.5	30	14	125	22	Ø20	M20	34	250	37
	M	N	O	P	Q	R	S	T	U	V	W	
	75	60	150	115	12.3	16	95	145	225	67.5	67.5	

型號 Model NO.	A	B	C	D	E	F	G	H	I	J	L	淨重(kg)
HWY-BH7-180H	240	80	125	40	20	180	26	Ø32	M24	50	250	55
	M	N	O	P	Q	R	S	T	U	V	W	
	75	70	132	135	14	25	95	170	270	60	55	

單位 Unit : mm

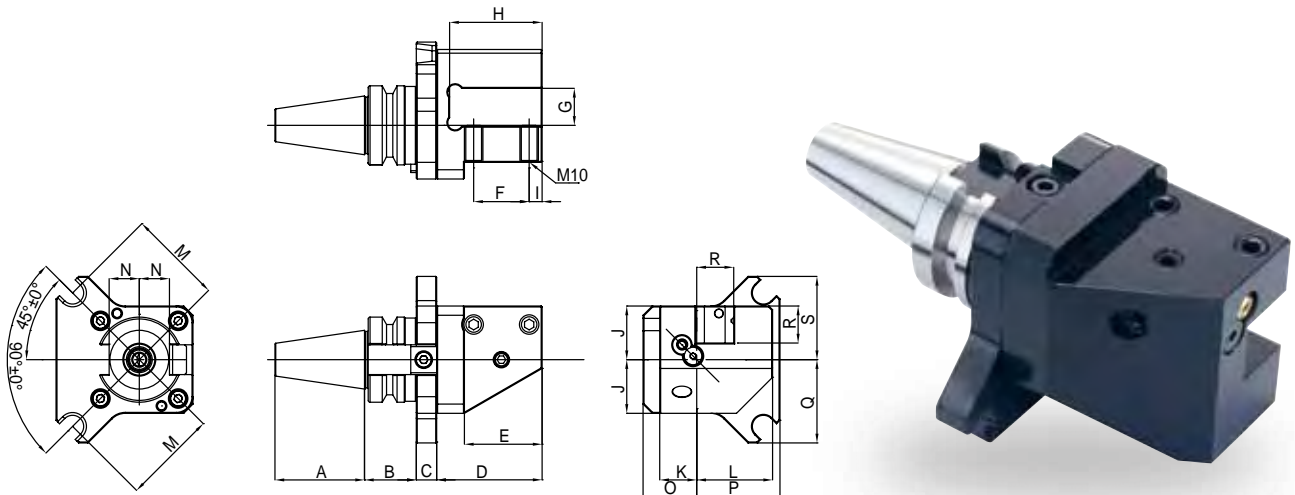


2015
NEW PRODUCT



立車刀桿 / BROTHER SPEEDIO M140X1 專用
Turning Tool Holder / BROTHER SPEEDIO M140X1

外徑 / 端面 應用
External Turning / Facing

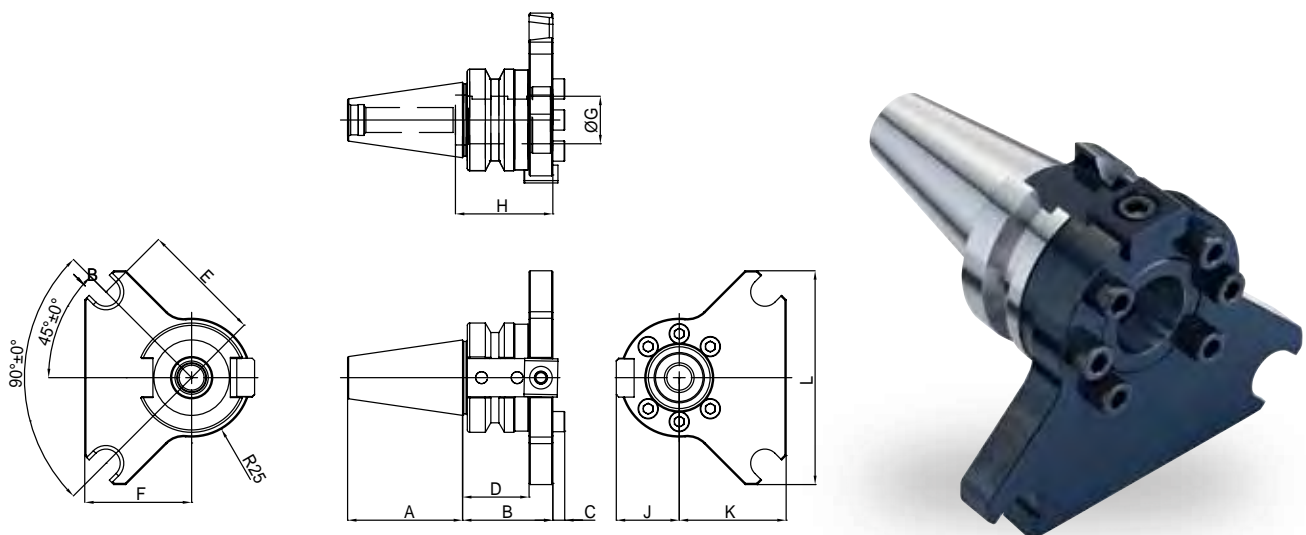


Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M	O	P	Q	R	S	N.W. (KG)
CBM-C1-BT30.1905.96	48.4	28	11	57	42	30	19.05	50	7	29	20	41	51	29	45	45	20	45	2
CBM-C1-BT30.20.96	48.4	28	11	57	42	30	20	50	7	29	20	41	51	29	45	45	20	45	2

Unit : mm

立車刀桿 / BROTHER SPEEDIO M140X1 專用
Turning Tool Holder / BROTHER SPEEDIO M140X1

內孔應用
For Boring Bar



Model No.	A	B	C	D	E	F	G	H	I	J	K	N.W. (KG)
CBM-E1-BT30.1905.38	48.4	38	5	28	51	45	19.05	41	26.5	45	90	0.7
CBM-E1-BT30.20.38	48.4	38	5	28	51	45	20	41	26.5	45	90	0.7

Unit : mm



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